An Analysis on the Path of Tax System Reform in the Context of Digital Economy

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Abstract: *In the era of economic digitization, the mismatch between the areas of tax collection and value creation has worsened the tax base erosion and profit transfer. The issue of revenue characterization and profit attribution in digital commercial activities has a significant impact on the implementation of tax administration rights in different countries. To tackle the challenges brought by the digital economy to the tax order, some countries have taken the lead in exploring the digital service taxes, aiming to expand the scope of permanent establishments and embed the user to engage in the value creation system, which helps to endow the source country with tax administration rights for the value creation of the digital economy. Currently, in the stage of rebuilding the order of tax administration in the digital economy, China shall start from the connectivity, and reconstruct the definition rules of digital tax administration that are suitable for China on the basis of the advanced experience in the world.*

Keywords: *digital economy; digital service tax; tax administration*

1. Research Background and Contribution

In 2022, the amount of digital economy in China reached 50.2 trillion yuan, with a nominal year-on-year growth rate of 10.3%. It has been much higher than the the nominal GDP growth rate of the same period for 11 consecutive years, and the proportion of the digital economy to GDP has reached 41.5%.[1] As mentioned in the report of the 20th National Congress of the Communist Party of China, it is necessary to speed up the development of the digital economy, promote the deep integration of the digital economy and the real economy, and build a digital industry cluster with international competitiveness. Today, the digital economy in China is in a state of imbalanced, insufficient and non-standard development. And it shall transform the traditional development mode, accelerate the overcoming the shortcomings and weaknesses, improve the governance of the digital economy China, and develop with a high-quality path. As a key driving force for stabilizing the economic growth in China, the digital economy is not compatible with the traditional tax system due to its characteristics of virtuality, non-intermediation and consumer engagement in value creation while increasing the local tax revenue, which results in the imbalanced distribution of regional tax benefits and widens the economic development gaps among different regions. The importance and the impact of the digital economy on the tax system bring the challenges to the institutional mechanisms. There is no denying that correcting the imbalance of regional tax distribution is a difficult problem that shall be tackled in the modernization of tax governance in the new development stage.

Starting from the macro level of tax system, this paper focuses on the allocation of taxing power, analyzes the causes for the asymmetric and imperfect local tax distribution system in the digital economy, studies the difficulties faced by the vertical allocation of taxing power, and puts forward the corresponding optimization suggestions, which will provide the suggestions for the tax governance reform of China in the digital economy.

2. Challenges Brought by the Digital Economy to Tax Administration

2.1 Issues of tax correlation

The source of income is the most important factor to be taken into consideration when distributing the regional taxation rights, and the most ideal method at present is to allocate the majority of income

to the place of origin. In the era of digital economy, the non-resident enterprises are able to engage in a large number of digital goods or services transactions in the countries or regions without any tax entities, which means that many commercial activities or businesses can be carried out without establishing the extensive tax entities.The development of digital technology has significantly changed the operational mode of enterprise economic activities. The space distance is no longer a barrier for enterprises when carrying out the international trade activities. The digital economy greatly improves the ability of enterprises to conduct the remote activities, allowing them to contact more potential customers and collect a great amount of information from the customers via the Internet. The result of the change in the operating mode of enterprise economic activities shows that it is unnecessary for the enterprises to establish the physical entities such as institutions, venues, or entrusted agents in the place where the economic activities or transactions occur to carry out the operations. The fact that a large number of sales activities in the digital economy can be engaged without the existence of local taxable entities has raised the question of whether the current tax rules (especially the permanent establishment and the related profit attribution rules in tax treaties) will remain to be effective in the digital economy.[2] According to Article 5, Paragraphs 5 and 6 of the Model Convention with Respect to Taxes on Income and on Capitals of the Organization for Economic Co-operation and Development (OECD), a permanent establishment not only refers to a significant physical presence of an enterprise in a country, but also includes the situations where non-resident enterprises conduct the business in the relevant country through the independent agents. In the digital economy, the non-resident enterprises can further engage in the economic activities of another country even without a fixed place of business or independent agents, which poses a challenge to the current definition of permanent establishment. In addition, some activities that used to be regarded as preparatory or auxiliary may gradually become the core businesses in the digital economy.[3] According to the current tax treaties, the place of origin of the country is not allowed to tax the operating profits of non-resident enterprises without establishing a permanent establishment. And there are no domestic laws of the country corresponding to the rules to support the source country to remotely tax the income obtained from sales activities of non-resident enterprises that fail to have a tax entity in their tax jurisdiction to customers. Therefore, the issue of tax correlation not only refers to how to define the permanent establishments in tax treaties, but also how to prepare the domestic legal rules to effectively tax the non-resident enterprises. Although the non-resident enterprises do not have any tax entities in a country, they have significant economic activities and gain the great income from it. However, owing to the rigidity of the current tax rules or policies, the source country of income fails to tax the non-resident enterprises, which will cause the loss of tax benefits in the source country as well as the unfair distribution of tax burden between the non-resident enterprises and the resident enterprises.

2.2 The attribution of data and its value creation.

The main characteristic of the digital economy lies in the high dependence on the intangible assets, especially the big data, which makes the data become the core resource of the digital economy. [4] The process of data collection, storage, analysis, processing and use in the digital economy may create the value for the enterprises. The problem arising from that refers to how the value generated at different stages of the data collection, storage, analysis, processing and use is distributed in different tax jurisdictions, and how the individuals or enterprises should characterize the data provided in transactions (for example, the free provision of goods, barter or other forms of transactions) from a tax perspective. Without analyzing at different stages such as data collection, analysis and use, it will be a huge challenge to estimate the objective value of raw data on the basis of function, asset and risk analysis. Since the data collected by the enterprises, like the intangible assets, will not be reflected on the balance sheet of the company, and there is no necessary correlation between the value of the data and the profits obtained by the company. The value of data can only be reflected when sold by the enterprises, and the data value depends on the buyer's ability to analyze and use the data. In the present business, there is value lying in the data or intangible assets that are considered unprotected by the law.

For different purposes, the enterprises may remotely collect the data from different countries or regions with the methods or technical means of data collection that may come from different countries; The enterprises will analyze and process the data they collect for improving their business activities in the source countries, such as advertising placement. Therefore, how to distribute the profits obtained by enterprises among these countries has become a major tax challenge. In addition, after the enterprises process the complex data, tracing the source of data may also become more difficult. If the enterprises process and analyze the data via cloud computing, it is also hard to determine the location of data processing. In the digital economy, the users play an important role in economic activities. In some cases, the value created in the digital economy may mainly come from the contributions made by the

users in a country or region. Therefore, it is extremely significant to determine the location of economic activities and the value creation of the income tax.

2.3 It is hard to accurately determine the tax base.

In the conventional economic model, the value created by products is determined by the socially necessary labor time condensed in the products, but the digital products and services in the digital economy belong to the results of intellectual labor. The issues on whether the complex intellectual labor achievements in the digital economy should still follow Marx's labor value theory, and if so, what is the relationship between the socially necessary labor time of complex intellectual labor and physical labor, are still controversial, which makes it difficult to determine the tax base for digital products and services.[5]

In the era of digital economy, the number of workers with the conventional production models has dropped dramatically, and the "unmanned factories" and "unmanned workshops" have arisen in many digital enterprises. For these new economies and formats that heavily rely on the digital technology for production and operation, knowledge accumulation and high-tech content play a decisive part in the boundaries of enterprise business. Although the physical labor consumption in those enterprises has been reduced significantly, it is able to create a great amount of material wealth. As for the emergence of digital products in the digital economy, some scholars argue that Marx's labor theory of value is outdated and should be replaced by Value of Knowledge. With the development of the digital economy, a large number of intelligent intensive labor has arisen, which poses a challenge to Marx's labor theory of value and reverses the main constituent element of labor. The carrier of intellectual achievements in the digital economy is the consumption of complex labor, which is the result of high-density input of "innovative brain" elements. Then labor has already freed itself from the troubles of "physical" labor and has become an intelligent intensive labor force. Judging from the characteristics of the achievements of intellectual labor, knowledge and technology served as the important production factors play a significant role in the production process. The major difference from general production factors lies in their characteristics of "replicability" and "no loss", which means that before being replaced by the new knowledge and technology, they can be permanently "replicated" and condensed in the value of new products. Although the knowledge and technological elements will not create the new value directly, they are able to greatly improve the labor productivity and have a multiplier effect on the value creation efficiency of live labor. The digital products and digital services belong to the intangible assets, and their value composition should be determined by the socially necessary labor time consumed. However, the profit and cost of complex intellectual labor achievements are difficult to determine in practice, which makes the pricing of digital products more complex and the tax base cannot be accurately determined. In addition, the pricing of digital products is also affected by some uncertain factors, which makes it more difficult to determine the tax base.

3. China's Plan for Digital Tax Administration

3.1 Reconstruct the rules for defining the tax administration rights.

It is the premise and basis for the local governments to exercise the tax administration rights to prepare the tax administration rules that are suitable for the digital economy and clarifying the applicable method of local tax distribution for digital enterprises. The perfect definition system of tax administration rights can not only improve the imbalance of regional tax distribution, but also contribute to the development of the digital economy in China.

3.1.1 Add the provisions on "virtual connection principle".

The concept of "virtual permanent establishment" is an alternative connectivity standard proposed for the digital economy. The proposal and clarification of the connotation of "virtual permanent establishment" have ensured the tax sovereignty of the source country and to some extent alleviated the tax conflicts caused by tax base erosion among the countries. What's more, the final report of the BEPS (Base Erosion and Profit Shifting) action plan also proposes the concept of "significant economic presence", which determines whether the non-resident enterprises consist of a significant economic presence in the source country by comprehensively taking the income, digitalization and user factors into consideration, as well as applying it as the standard to the taxation in the source country. The principle of "significant economic existence" breaks through the shackles of "permanent establishment" in traditional taxation without only focusing on the recognition of location as a link, but with the

quantifiable standards for comprehensive judgment, which is an innovation of "virtual permanent establishment".

3.1.2 Clarify the profit attribution method for the cross-regional digital enterprises.

To reconstruct the rules for defining the tax administration rights in the digital economy, it is necessary to clarify the method of profit attribution for the digital enterprises. The convenience of digital enterprise mobility and the virtuality of transactions increase the cost of tax administration, and the regional differences in tax administration are likely to cause duplicate taxation. Only by further clarifying the regional profit distribution methods among the digital enterprises can we tackle the problems of tax imbalance from the beginning.

The local tax governance system of the digital economy in China can make attempts to that: (1) It shall introduce the method of surplus profit distribution to determine the profit distribution of cross-regional digital enterprises that apply the principle of "virtual connection". (2) It shall meet the requirements of promoting the development of small and medium-sized digital enterprises, and limit the scope of enterprises that shall distribute the profits among the regions with a focus on large, high profit cross-provincial digital enterprise groups. (3) It shall obtain the remaining profit by subtracting the conventional return determined on the basis of the traditional independent transaction principle from the pre-tax profit determined by its consolidated financial statements, and then substitute it into the formula model to calculate the taxable amount at the source of income.

3.2 Standardize the operation power to prepare the local tax preferential policies.

In the case of limited local tax autonomy, the rights to prepare the tax preferential policies can serve as the main tool for the local tax governance, and make appropriate adjustments to the regions of market failure from a macro perspective. However, due to the short-sighted economic development of local governments, it is easy to prepare the fragmented and differentiated tax preferential policies, which will artificially create tax depression, distort the market competition mechanisms, and cause extremely uneven tax burden among the regions. Optimizing the vertical allocation of tax power shall standardize the formulation power of local tax preferential policy, break through the dilemma of "race to the bottom" in the local taxation, and finally reduce the abnormal horizontal flow of tax revenue created artificially.

The high tax preference sensitivity of digital enterprises and their strong policy realization ability require that local governments, as policy makers in the fair competition review system, shall effectively alleviate the drawbacks of "acting as both athletes and judges". The suggestions are as follows: (1) Introduce an external review mechanism. And the new policies to carry out the fair competition review should adopt an external review system of policy making subject and policy review subject separation. (2) Based on the rapid development of the digital economy, constantly adjust the tax policies. Different from the stability of tax laws, those which have a large quantity will have high requirements on the professional techniques. Therefore, it shall take adjusting the provisions of post review in the Measures for the Administrative Measures for the Formulation of Tax Normative Documents into account. The business supervisory department of the higher-level tax authority that prepares the local tax preferential policies can directly carry out the fair competition review. To improve the efficiency of the review, a negative list sorting out the main situations that restrict the competition can be prepared in advance. For the tax preferential policies prepared by the lower level authorities, it shall conduct a preliminary review according to the list. If there are any provisions in the negative list, it means that the policy may exclude or restrict the competition. Thus, it is necessary to conduct a further review of the legitimacy and rationality of the policy, and adopt the evaluation opinions of the third-party institutions. (3) A sound fair competition review system of tax preferential policy can not be established without a deterrent accountability mechanism. For the illegal cases of failure to review or errors in review that should be reviewed, it shall strengthen the punishment mechanism and enhance the ability to pursue the legal responsibility. Of course, in the long run, to achieve the thorough standardization of preferential tax policies in the digital economy, it shall rely on the improvement of the relevant legislation on tax incentives. The writer hopes to integrate tax incentives into the basic normative framework in the process of gradually promoting the reform of the tax legislation system in China.

3.3 Correct the institutional design of the allocation of tax revenue right

Promoting the coordinated and orderly operation of tax revenue rights is an essential aspect of tax legal governance. A good and coordinated central and local tax revenue distribution system should have

the function of reducing the regional tax imbalances. Setting a tax sharing ratio that focuses on the regional differences in the development of the digital economy helps to improve the unfair state of horizontal tax distribution. The positive effects of the horizontal transfer payment system will also contribute to the transformation from formal justice of "robbing the poor and assisting the rich" to substantive fairness of "common prosperity".

3.3.1 Adjust the ratio of tax sharing between central and local governments.

A reasonable tax revenue sharing system can alleviate the impact of the digital economy on the local tax revenue. A reasonable sharing ratio helps to narrow the tax gap among the regions caused by the digital economy and improve the supply capacity of local public services. The central and local tax distribution should pay more attention to the mismatch between the sources of income and tax collection areas brought by the digital economy, as well as the differences in the development level of the digital economy among the regions, and shall not follow a fixed and rigid sharing ratio. The actual situation of the local area should be taken into the consideration of tax sharing through scientific calculation formula model design. Each region shall focus on different dimensions of factors and calculate the local sharing ratio by substituting the specific local values. In view of the specific contribution differences of each factor to the ratio, different weights can be given to each factor, which helps to ensure the rationality of the calculation results.

3.3.2 Introduce a horizontal transfer payment system.

In the context of the digital economy, the differences in development among the regions require the central government to adhere to the principle of regional fairness in differentiated fiscal allocation, and to correct the regional tax imbalances through transfer payments. The key function of the transfer payment system lies in regulating the horizontal imbalances, coordinating the regional development, and narrowing the gap in financial allocation among the regions. However, currently, the vertical transfer payments, mainly based on the tax returns and income tax base returns, still serves as a leading role. The contradiction, which is related to the distribution method of multiple contributions and benefits, the stability requirements of its policies, and the diversity and variability required by the legal tax governance in the digital economy, makes it hard to achieve the equalization efficiency. It is suggested that the horizontal transfer payment should be introduced into the transfer payment system framework, the cluster effect should be fully utilized, and the local counterpart assistance should be strengthened to make up for the shortage of vertical transfer payment, and the regional tax imbalance in the digital economy should be corrected from the end.

3.4 Appropriately expand the legislative power of local taxation

There is no doubt that, currently, the local governments in China have limited power in tax management, making it hard to independently make the local tax arrangements according to their financial situation, tax source distribution and regulatory goals, which causes their tax governance capabilities lagging far behind the requirements of the development of digital economy. To effectively correct the regional tax imbalances, a key point lies in the vertical allocation of tax legislative rights. This is not only an important guarantee for the implementation of the measures to optimize the vertical allocation of tax administration rights and tax revenue rights mentioned above, but also the core content of establishing a new tax rights system in the digital economy. Moreover, the regional characteristics of China's tax sources require leaving room to the certain participation for the local governments in the unified legislation. Timely and moderately expanding the legislative power of local taxation is not only good for promoting the initiative of local governments in tax governance, but also to enhancing the local regulation and self-rescue capabilities against the regional tax base erosion and tax transfer in the digital economy.

The suggestion is that, at this stage, it shall increase the engagement of local governments when preparing the tax schemes in the field of digital economy, especially in making the tax rate determination, tax reduction and other preferential choices. It can learn from the legislative experience of the Environmental Protection Tax Law and introduce the local decision-making appropriately. As is known to all, the Environmental Protection Tax Law authorizes the provincial governments to determine and adjust the specific applicable tax amounts for taxable air and water pollutants within the prescribed range, and submits them to the provincial people's congress for approval. Obviously, the limited tax legislative power is granted to the local government. When preparing and revising the tax administration rules and profit distribution plans for the digital economy, the legislators may consider authorizing provincial governments to determine and adjust the quantitative standards for exercising

tax jurisdiction over digital enterprises, as well as the distribution within the scope permitted by law in accordance with the development of the regional digital economy and actual needs. In addition, it shall also take the selective opening-up of the tax legislative authorization provisions in the Legislation Law to local authorities into consideration. However, given the differences in governance capabilities and the demanding for market integration, the aforementioned authorization shall only be limited to provincial legislatures. Specifically, pilot selection can be applied to expanding the scope of tax legislative authorization clauses from the State Council to the State Council, the provincial people's congresses and their standing committees, and from administrative regulations to local regulations.

4. Conclusion

The realization of effective tax reform in the digital economy is not only to reduce the negative externalities caused by the tax base erosion and profit transfer to the local finance, but also to optimize the regional allocation of digital and market resources, which is an inevitable requirement. It shall also achieve the substantive justice under the difference in tax endowments, help to open up the key blocking points in the development of the digital economy, and promote the construction of a unified national large market in the new development pattern. Optimizing the vertical allocation of tax power is a practical and feasible path to correct the regional tax imbalance in the era of digital economy. Besides specific institutional and mechanism construction, the scientific top-level design plays a key role in a perfect tax governance system, which means that it shall effectively correct the regional tax imbalance in the field of digital economy: (1) Attention should be paid to the construction of sustainable development capacity of the digital economy, and a balance should be made between tax collection and supporting the development of digital enterprises. It is not advisable to "kill the goose that lays the golden eggs", and neglect the development requirements of small and medium-sized digital enterprises on the grounds of protecting local tax revenue. Its main point is how to find the best balance point between public and private sectors in order to improve the quality and efficiency of tax administration. (2) Attention should be paid to narrowing the gap of regional digital tax, maintaining the market order, and achieving the overall tax benefits. The distribution of regional tax benefits adjusted with the idea of absolute average means quenching a thirst with poison.

Acknowledgements

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